

ORAL ARGUMENT NOT YET SCHEDULED

No. 16-1186

**In the United States Court of Appeals
for the District of Columbia Circuit**

SIERRA CLUB,
Petitioner,

v.

DEPARTMENT OF ENERGY,
*Respondent,***DOMINION COVE POINT, LNG, LP and
AMERICAN PETROLEUM INSTITUTE,**
Intervenors-Respondents.

On Petition for Review of Orders of the Department of Energy
3331-A (May 7, 2015) and 3331-B (April 18, 2016)

**PROOF BRIEF OF AMICI CURIAE CHESAPEAKE CLIMATE ACTION
NETWORK; EARTHREPORTS, INC. (DBA PATUXENT RIVERKEEPER),
POTOMAC RIVERKEEPER, INC.; STEWARDS OF THE LOWER
SUSQUEHANNA, INC.**

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**CORPORATE AND FINANCIAL DISCLOSURE STATEMENT PURSUANT
TO FEDERAL RULES OF APPELLATE PROCEDURE 26.1 AND 29(c)
AND D.C. CIRCUIT LOCAL RULE 26.1**

Amici are non-profit organizations. No party to this filing has a parent corporation, and no publicly held corporation owns 10 percent or more of the stock of any of the parties to this filing.

**STATEMENT OF COUNSEL PURSUANT TO
FEDERAL RULE OF APPELLATE PROCEDURE 29(c)(5)**

Counsel for Amici hereby states that no counsel for any party to this litigation authored this brief in whole or in part; no party or party's counsel contributed money that was intended to fund, or did fund, the preparation or submission of this brief; and no person, other than Amici, contributed money that was intended to fund, or did fund, the preparation or submission of this brief.

**STATEMENT OF COUNSEL PURSUANT TO FEDERAL RULE OF
APPELLATE PROCEDURE 29(a) AND D.C. CIRCUIT LOCAL RULE 29(b)**

All parties to this litigation have consented to the participation of Amici in this matter and to the filing of this brief.

**CERTIFICATE OF PARTIES,
RULINGS UNDER REVIEW, AND RELATED CASES**

The parties in this case, rulings under review, and related cases are set forth in the opening brief of Petitioner Sierra Club.

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GLOSSARY

Addendum	Department of Energy, <i>Addendum to Environmental Documents Concerning Exports of Natural Gas from the United States</i> (May 29, 2014)
Antero	Antero Resources Corporation
Application	Dominion Cove Point LNG, LP, Application for Long-Term Authority to Export LNG to Non-Free Trade Agreement Countries, DOE/FE Docket No. 11-128-LNG (Oct. 3, 2011)
Cabot	Cabot Oil & Gas Corporation
CCAN	Chesapeake Climate Action Network
CEQ Guidance	Council on Env'tl. Quality, <i>Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews</i> (Aug. 1, 2016)
DCP or Dominion	Dominion Cove Point LNG, LP
DOE	Department of Energy
EA	Environmental Assessment
EA Comments	Sierra Club et al., Comments on Environmental Assessment for Dominion Cove Point LNG, LP, FERC Docket No. CP13-113, Accession No. 20140616-5269 (June 16, 2014)
EIA	Energy Information Administration
EIA 2012 Study	EIA, <i>Effect of Increased Natural Gas Exports on Domestic Energy Markets</i> (Jan. 2012)
EIA 2014 Study	EIA, <i>Effect of Increased Levels of Liquefied Natural Gas Export on U.S. Energy Markets</i> (Oct. 29, 2014)

EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FONSI	Finding of No Significant Impact
FSGEIS	New York State Department of Environmental Conservation, Final Supplemental Generic Environmental Impact Statement (May 13, 2015)
LNG	Liquefied Natural Gas
NEPA	National Environmental Policy Act
NYSDEC	New York State Department of Environmental Conservation
Project	Project Described in Application
RDSGEIS	NYSDEC, Revised Draft Supplemental Generic Environmental Impact Statement (Dec. 2011)
SOLS	Stewards of the Lower Susquehanna

IDENTITY AND INTERESTS OF AMICI

Amici are non-profit organizations the members of which live and engage in recreational activities near the Cove Point LNG export facility (the “Project”) or in the Marcellus shale region, where Project exports authorized by the Department of Energy (“DOE”) will induce increased natural gas development. Amici support Sierra Club’s petition for review, because DOE approved those exports without analyzing their indirect impacts—including the severe adverse effects on public health, regional ecosystems, and the global climate—in violation of the National Environmental Policy Act (“NEPA”). Amici submit this brief to highlight evidence demonstrating that those significant indirect effects will be caused by the Project and are reasonably foreseeable.

Chesapeake Climate Action Network (“CCAN”) is the first grassroots, non-profit organization dedicated exclusively to fighting global warming in Maryland, Virginia, and Washington, D.C. CCAN’s mission is to mobilize a powerful grassroots movement in the region surrounding our nation’s capital to call for policies that will put us on a path to climate stability. CCAN envisions a country where clean energy sources, such as solar and wind power, are prioritized; dirty fossil fuels are phased out; and greenhouse gases are reduced sufficiently to create a stable, sustainable climate. CCAN also seeks to hold government agencies accountable for compliance with environmental laws and has intervened in many

energy-related proceedings at the state and federal level. CCAN joins this brief because DOE has refused to provide an analysis of the life-cycle climate impacts of the Project's liquefied natural gas ("LNG") exports, in violation of NEPA.

Earthreports, Inc. (dba Patuxent Riverkeeper) is a non-profit watershed advocacy organization that seeks to protect, restore, and advocate for clean water in the Patuxent River and its connected ecosystem. The Patuxent River drainage area runs for 110 linear miles through seven Maryland counties, terminating at the Chesapeake Bay. Patuxent Riverkeeper patrols the river, investigates and resolves water quality and pollution complaints, launches and manages restoration projects, and raises awareness about local water resources, river ecology, and the problems of sustainability in a fast urbanizing metropolitan region. Patuxent Riverkeeper and its members, especially those in Calvert County, Maryland, have an interest in this proceeding because portions of the Project will have direct and deleterious impacts on the drainage of the Patuxent River corridor, the waters surrounding the county, and ultimately the Chesapeake Bay.

Potomac Riverkeeper, Inc. is a non-profit organization dedicated to restoring and protecting the health of the Potomac River, its tributaries, and the environment these waterways support. Potomac Riverkeeper advocates for the Potomac River watershed in an effort to ensure that state and federal

environmental laws governing that watershed are effectively enforced. Potomac Riverkeeper has more than 2,500 members in Maryland, Pennsylvania, Virginia, West Virginia, and the District of Columbia, many of whom will suffer the direct and indirect impacts of the Project, including impacts of the infrastructure that will deliver gas to the terminal for liquefaction and export and of the wells that will supply the gas.

Stewards of the Lower Susquehanna, Inc. (“SOLS”) is a non-profit environmental advocacy organization headquartered in the city of York, Pennsylvania, with approximately 250 members dedicated to protecting and improving the ecological and aesthetic integrity of the Lower Susquehanna Watershed and Chesapeake Bay. SOLS’ members use the Lower Susquehanna watershed for fishing, hunting, boating, domestic uses, and for its scenic and historic value. Dozens of SOLS’ members live, work, and recreate along the Susquehanna River and its tributaries, downstream from areas in Pennsylvania that already have experienced intensive shale gas development and associated infrastructure construction, with their attendant adverse impacts on the watershed. SOLS and its members seek to protect the Lower Susquehanna Watershed and Chesapeake Bay from increased industrial development that will be induced by the Project.

STATEMENT OF THE CASE

Amici adopt the Statement of the Case set forth in the opening brief of Petitioner Sierra Club. Supplemental facts are incorporated into the Argument below.

SUMMARY OF ARGUMENT

In *EarthReports, Inc. v. Federal Energy Regulatory Commission*, this Court held that the Federal Energy Regulatory Commission (“FERC”) did not have an obligation under NEPA to analyze either the impacts of gas production induced by exports from Cove Point or the Project’s life-cycle climate impacts. *See* 828 F.3d 949, 956 (D.C. Cir. 2016). The Court reasoned:

Because [DOE] alone has the legal authority to authorize [Dominion] to increase commodity exports of liquefied natural gas[,] the challenged orders here . . . are not the legally relevant cause of the[se] indirect effects and the Commission did not need to consider [them] in its NEPA review. As in *Sierra Club (Freeport)* and *Sierra Club (Sabine Pass)*, petitioners remain[] free to raise these issues in a challenge to the [DOE’s] NEPA review of its export decision.

Id. (internal quotations and citations omitted). When the indirect impacts of a major federal action are “reasonably foreseeable,” they must be analyzed under NEPA. 40 C.F.R. § 1508.8(b). If FERC need not meet that requirement for lack of jurisdiction over Project exports, then the obligation inescapably rests on DOE.

Because the indirect impacts of exports from Cove Point are reasonably foreseeable, and DOE failed to evaluate them, Amici ask this Court to vacate DOE's approval of the Project. Numerous tools, models, and studies offer methodologies that could have been used to estimate the volume of gas production induced by the Cove Point export approval and the environmental impacts of that production and the transmission of gas to Cove Point. The record in this case offers abundant evidence that, together with readily accessible public information, would have enabled DOE to disclose who will produce the gas for export from Cove Point, what volumes of gas they will ship to Cove Point, approximately how many new wells will be needed to supply those volumes, where the wells supplying that gas and the pipelines transporting that gas will be located, and when gas delivery will occur. Resources cited in the record also could have been used to forecast the life-cycle greenhouse gas emissions of the Project and the climate impacts of those emissions. DOE unlawfully ignored those resources and failed to evaluate the reasonably foreseeable indirect impacts of exporting nearly a billion cubic feet of gas per day to India and Japan over a 20-year period.

ARGUMENT

I. NEPA Requires Analysis of the Indirect Impacts of Exports from the Project.

The “reasonably foreseeable” indirect environmental effects of the Project must be factored into a NEPA review. 40 C.F.R. § 1508.8(b). DOE’s analysis therefore was required to include “growth inducing effects and other effects related to induced changes in the pattern of land use . . . and related effects on air and water and other natural systems, including ecosystems.” *Id.*; *see id.* § 1502.16(b). Growth in northeastern shale gas production and transmission that will be induced by the Project falls squarely within this requirement, as do the increased greenhouse gas emissions generated by those sources, the overseas shipping, and the ultimate burning of the gas.

Implicit in the requirement to analyze indirect impacts is a duty to engage in “reasonable forecasting.” *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1310 (D.C. Cir. 2014) (quoting *Scientists’ Inst. for Pub. Info., Inc. v. Atomic Energy Comm’n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973) (noting that the court “must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry’”)). An effect is reasonably foreseeable if it is so “likely to occur that a person of ordinary prudence would take it into account in reaching a decision.”

Mid States Coal. for Progress v. Surface Transp. Bd., 345 F.3d 520, 549 (8th Cir. 2003) (internal quotation and citation omitted). Under this standard, courts have required agencies evaluating energy infrastructure projects to analyze indirect effects of construction and operation. *See id.* at 549–50 (requiring assessment of impacts of increased coal consumption resulting from construction of rail line to coal mine); *Border Power Plant Working Grp. v. Dep’t of Energy*, 260 F. Supp. 2d 997, 1030–31 (S.D. Cal. 2003) (requiring evaluation of Mexican power plant impacts caused by new transmission line to California grid).

This Court ruled that FERC did not have to disclose “the indirect effects of the anticipated *export* of natural gas” from Cove Point—whether upstream impacts of gas production or life-cycle impacts of greenhouse gas emissions—because Project exports were under the exclusive jurisdiction of DOE. *EarthReports*, 828 F.3d at 955–56. In evaluating impacts of those exports, however, DOE relied on FERC’s environmental review and did no Project-specific analysis of indirect effects before issuing its finding of no significant impact (“FONSI”). Because the Project’s indirect impacts are significant and unmitigated, an adequate analysis would have required preparation of an environmental impact statement (“EIS”), *see* 42 U.S.C. § 4332, which DOE failed to do. DOE cannot retroactively cure its NEPA violation by invoking a generalized analysis developed for the separate

public interest determination required under the Natural Gas Act. *See* Petitioner's Brief at 71–74.

II. DOE Unlawfully Failed to Consider the Effects of Natural Gas Production Induced by Project Exports.

DOE's FONSI for the Project was based entirely on two documents:

(1) FERC's Environmental Assessment ("EA") of the Project; and (2) FERC's order authorizing Project siting, construction, and operation.¹ DOE also considered its *Addendum to Environmental Documents Concerning Exports of Natural Gas from the United States* ("Addendum") but stated explicitly that "all discussion and analyses related to the potential impacts of a grant of the export application are contained within the EA prepared by FERC."² Neither the EA nor FERC's order analyzed indirect impacts of exporting nearly one billion cubic feet of gas per day to India and Japan for at least 20 years. *See EarthReports*, 828 F.3d at 955 (noting that FERC declined to examine those effects). With respect to the Addendum, DOE expressly admitted that it "addresses unconventional natural gas

¹ *See* DOE, Office of Fossil Energy, Finding of No Significant Impact for Cove Point Liquefaction Project Regarding Dominion Cove Point LNG, LP, Application Seeking Department of Energy Authorization to Export Liquefied Natural Gas from Dominion Cove Point LNG Terminal to Non-Free Trade Agreement Nations 3, DOE/EA-1942, DOE/FE Docket No. 11-128-LNG (Nov. 5, 2014) [JA__].

² *Id.* FERC was required to "consult with and obtain the comments of" DOE with respect to the indirect impacts of exports. 42 U.S.C. § 4332. DOE provided no such comments and instead relied on an EA devoid of the indirect impact analysis.

production in the nation as a whole” but “does not attempt to identify or characterize the incremental environmental impacts that would result from LNG exports,” much less the indirect impacts of exports specifically from Cove Point over the Project’s life.³ Because there is ample record evidence that those impacts will be significant, DOE’s FONSI is unsupported, and its export approval should be vacated.

The record demonstrates that the Project will cause trillions of cubic feet of additional gas production and that the environmental damage caused by that development will be severe.⁴ Combining record evidence with information readily available on public websites would have allowed DOE to estimate: (1) how much new gas production will be required to serve the demand created by the Project; (2) production volumes at Northeastern shale wells over time; (3) how many new

³ DOE, FONSI, *supra* note 1, at 2 [JA__]. Lacking any Project-specific analysis, the Addendum necessarily contained no evaluation of alternatives to the Project, and for this reason, too, it could not cure the deficiencies in the EA. *See* 40 C.F.R. §§ 1502.14 (requiring analysis of alternatives), 1502.16 (requiring that the analysis of each alternative include discussion of indirect impacts).

⁴ All of the factual resources cited in this brief that are dated prior to May 4, 2015, when FERC denied rehearing of its Project approval, were cited in formal filings included in the FERC docket or were readily accessible matters of public record. For the convenience of the Court, Amici have provided the unique Accession Numbers from FERC Docket No. CP13-113 or URLs for sources that are not included in the Joint Appendix for this proceeding. FERC could have used all of the cited resources to assess the Project’s indirect impacts, but declined to do so.

wells will be needed to satisfy new Project demand; (4) where wells serving the Project will be located; (5) what pipeline Cabot Oil & Gas Corporation (“Cabot”)—the company supplying gas for export to Japan—will use to transport its product to Cove Point; (6) the typical impacts of well development and gas transmission, assuming regulatory compliance; and (7) the additional impacts of Cabot’s wells, given its record of environmental violations.⁵ With that concrete information, DOE was not relegated to studies estimating aggregate U.S. production induced by LNG export or aggregate impacts of domestic gas development but rather could have tailored its analysis specifically to the Project. Because the nature and extent of impacts from Project-induced development are anything but speculative, and the costs of obtaining that information were not “exorbitant,” DOE’s failure to provide that analysis violates NEPA. 40 C.F.R. § 1502.22(a).

⁵ See Pa. Dep’t of Env’tl. Prot., <http://www.dep.pa.gov/> (website with well status, operators, and maps; production reports; and violation data); Letter from Earthjustice, FERC Docket No. CP13-113, Accession No. 20140219-5145 (Feb. 19, 2014) (attaching Press Release, *Cabot Oil & Gas Corporation Provides Corporate Update, Announces Agreement to Provide Natural Gas to the Dominion Cove Point LNG Terminal* (Dec. 19, 2013), and providing information about Cabot’s well locations, production declines, customer commitments, and environmental compliance) [JA____]; N.Y. Dep’t of Env’tl. Conservation (“NYSDEC”), Final Supplemental Generic Environmental Impact Statement (May 13, 2015), <http://www.dec.ny.gov/energy/75370.html> (“FSGEIS”).

A. Project Exports Will Cause Additional Gas Development.

There can be little question that approving Project exports opens up an overseas market to domestic gas and thereby causes producers of the fuel to ramp up supply. The Project applicant, Dominion Cove Point LNG, LP (“Dominion” or “DCP”), describes inducement of new production as the “most basic benefit” of Cove Point exports. DCP has admitted that “producers . . . will be obligated to match production to export related demand.”⁶ According to Dominion, the Project will “provid[e] a steady, incremental demand for gas” and thereby “support ongoing supply development.”⁷

Federal agencies also have “recognized that an increase in natural gas exports will result in increased production.”⁸ The Energy Information Administration (“EIA”) repeatedly has confirmed that connecting those supplies with overseas demand will raise the price of domestic gas and increase domestic

⁶ See Dominion, Application for Long-Term Authorization to Export LNG to Non-Free Trade Agreement Countries, FE Docket No. 11-128-LNG, at 31, 35 (Oct. 3, 2011) (“Application”) [JA____, ____].

⁷ *Id.* at 14–15 [JA____–____]; see *id.* at 9 (claiming that “LNG exports will increase the opportunities for more robust development of energy resources”) [JA____].

⁸ U.S. Env’tl. Prot. Agency (“EPA”), Region 3, Detailed Comments on FERC’s EA, Cove Point Liquefaction Project, FERC Docket No. CP13-113-000, Accession No. 20140617-4003 (June 16, 2014) (describing FERC and DOE) [JA____–____].

production.⁹ In 2012, the EIA predicted that 60–70 percent of the demand created by export projects throughout the United States will be met with new gas development, and in 2014, the EIA revised that figure upward to 61–84 percent.¹⁰ DOE did not have the option under NEPA simply to ignore the models and to avoid the analysis. *Cf. Mid States*, 345 F.3d at 550 (requiring that an agency use available models to estimate air quality impacts of increased availability of coal in evaluation of a proposed rail line to coal mines).

The record confirms the Project’s foreseeable effect on production. In December 2013, Cabot announced an agreement to sell gas to Pacific Summit Energy, which would ship 50 percent of DCP’s Project capacity to Japan.¹¹ According to Cabot, it agreed to sell Pacific Summit Energy 350,000 million British thermal units per day (the equivalent of 350 million cubic feet per day) of Marcellus Shale gas for 20 years, commencing when Dominion’s export terminal

⁹ EIA, *Effect of Increased Levels of Liquefied Natural Gas Export on U.S. Energy Markets* (Oct. 29, 2014) (“EIA 2014 Study”) [JA____]; EIA, *Effect of Increased Natural Gas Exports on Domestic Energy Markets* 6 (Jan. 2012) (“EIA 2012 Study”) [JA____]. The EIA derived these estimates from the National Energy Modeling System, which models the economy’s energy use. *See* EIA, *The National Energy Modeling System: An Overview* 1–2 (2009), [https://www.eia.gov/forecasts/aeo/nems/overview/pdf/0581\(2009\).pdf](https://www.eia.gov/forecasts/aeo/nems/overview/pdf/0581(2009).pdf).

¹⁰ *See* EIA 2014 Study, *supra* note 9, at 9–12 [JA____–____]; EIA 2012 Study, *supra* note 9, at 6, 10 [JA____, ____].

¹¹ *See* Press Release, *supra* note 5 [JA____].

opens.¹² By the time it made that announcement, Cabot had leased 200,000 acres of land in Susquehanna County, in northeastern Pennsylvania.¹³ Cabot's CEO explained: "This long-term firm sales agreement . . . ensures the continuing development of our Marcellus Shale position in Northeast Pennsylvania for years to come."¹⁴

Shortly thereafter, FERC received an application for permission to construct the Atlantic Sunrise Pipeline.¹⁵ Market analysts concluded that the new pipeline would "pave the way for Cabot's shipment of [gas] to Dominion Cove Point LNG to fulfill a 20-year supply agreement with Pacific Summit Energy."¹⁶ According to

¹² See *id.* [JA____].

¹³ See Brendan Gibbons, *Cabot's NEPA Wells "Still Howling" a Year Later*, Scranton Times-Tribune, Nov. 18, 2013, <http://thetimes-tribune.com/news/cabot-s-nepa-wells-still-howling-a-year-later-1.1587463> (cited in Letter from Earthjustice, FERC Docket No. CP13-113, Accession No. 20140219-5145 (Feb. 19, 2014)).

¹⁴ See *Cabot to Supply Gas to Dominion Cove Point LNG Terminal*, LNG World News, Dec. 19, 2013, <http://www.lngworldnews.com/cabot-to-supply-gas-to-dominion-cove-point-lng-terminal/>.

¹⁵ Transcontinental Gas Pipe Line Company, LLC, Application for Certificate of Public Convenience and Necessity, FERC Docket No. CP15-138, Accession No. 20150331-5153 (Mar. 31, 2015), http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20150331-5153 (click on Transco Atlantic Sunrise – 7(c) Application, part 1).

¹⁶ Christopher E. Smith, *Cabot Secures Transco Natural Gas Pipeline Space, Sales to WGL*, Oil & Gas J., Feb. 21, 2014, <http://www.ogj.com/articles/2014/02/cabot-secures-transco-natural-gas-pipeline-space-sales-to-wgl.html>.

the pipeline application, Cabot has “committed to 850,000 [decatherms/day] of firm transportation capacity from a new interconnection in Susquehanna County, Pennsylvania,” and 350,000 decatherms/day—the equivalent of 350 million cubic feet per day—will be delivered “to the existing point of interconnection between Transco’s mainline and Dominion Transmission’s Pipeline,” which serves Cove Point.¹⁷

The source of the other 50 percent of Project capacity is also known. In May 2015, Dominion’s customer for shipments to India announced a long-term agreement to buy gas produced from the Marcellus and Utica Shales for liquefaction and loading at Cove Point.¹⁸ According to news reports, “the majority of the gas—3.3 million cubic feet” will come from Antero Resources Corp. (“Antero”), which “operates in eastern Ohio’s Utica fields and southwestern

¹⁷ Transcontinental Gas Pipe Line Company, LLC, Application for Certificate of Public Convenience and Necessity, *supra* note 15, at 10.

¹⁸ Sam Kusic, *Region’s Shale Gas Will Help Fuel India*, Pittsburgh Bus. Times, Dec. 5, 2014, <http://www.bizjournals.com/pittsburgh/blog/energy/2014/12/regions-shale-gas-will-help-fuel-india.html>.

Pennsylvania's and northern West Virginia's Marcellus fields.”¹⁹ Antero had delayed putting Marcellus and Utica Shale gas wells into production because of unfavorable market conditions.²⁰ Antero, like Cabot, stands ready to ramp up production of “domestic natural gas that might otherwise be shut-in as a result of a lack of market demand.”²¹

The record thus demonstrates that the Project will cause increased gas production specifically in the Northeast. In fact, FERC determined that no proposed Project alternative located somewhere other than on the East Coast would be viable, because of Dominion's presumption that its “customers selected DCP's facility as their location for export due to its proximity to natural gas supplies in the northeastern United States.”²² Gas production sufficient to supply nearly a billion cubic feet per day of gas over a 20-year period will cause a wide range of

¹⁹ See *id.*; *GAIL India Inks Agreement to Buy 2.5 Million Tonnes of LNG from US-based Firm*, Econ. Times, Dec. 5, 2014, <http://economictimes.indiatimes.com/industry/energy/oil-gas/gail-india-inks-agreement-to-buy-2-5-million-tonnes-of-lng-from-us-based-firm/articleshow/45383664.cms>.

²⁰ See Kusic, *supra* note 18; Econ. Times, *supra* note 19; see also *Antero Delays Marcellus Well Completions*, Unconventional Oil & Gas Rep., Apr. 1, 2015, <http://www.ogj.com/articles/uogr/print/volume-3/issue-2/antero-delays-marcellus-well-completions-stays-highly-hedged.html>.

²¹ DCP, Application, *supra* note 6, at 35 [JA____].

²² FERC, Environmental Assessment for the Cove Point Liquefaction Project, Accession No. 20140515-4002, at 176 (May 15, 2014) [JA____].

environmental impacts in the producing region. DOE therefore had an obligation under NEPA to evaluate those impacts and to assess their significance, before approving the Project. *See Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 52 (1983) (“The agency must explain the evidence which is available, and must offer a “rational connection between the facts found and the choice made.”) (internal citation omitted); *Brady Campaign to Prevent Gun Violence v. Salazar*, 612 F. Supp. 2d 1, 21 (D.D.C. 2009) (finding that an agency “arbitrarily and capriciously ignored the environmental impacts”).

B. The Amount and Location of Project-Induced Gas Production and Transmission Are Reasonably Foreseeable.

Using the EIA models and other public resources, Sierra Club and Amici calculated the approximate amount of new gas development that will be induced by Project exports:

The EIA generally assumes that operating liquefaction equipment increases demand by 10% of the export volume.²³ [T]he EIA estimates that 63 percent of the demand will be met with newly producing wells,²⁴ with “about three-quarters of this increased production [coming] from shale sources.”²⁵ Accordingly,

²³ EIA 2012 Study, *supra* note 9, at 2 [JA____].

²⁴ *Id.* at 10 [JA____].

²⁵ *Id.* at 6 [JA____]. In particular, EIA projected that 93 percent of the increased domestic production would come from unconventional sources, including 72 percent from shale gas. *See id.* at 11 [JA____]; DOE, Addendum at 4 [JA____].

Dominion's proposal to export 0.77 billion cubic feet ("bcf") per day of gas can be expected to create 0.85 bcf/d of additional demand, which in turn will induce an additional 0.53 bcf/day of new natural gas production, at least 0.39 bcf/day of which will come from shale formations, most likely the nearby Marcellus shale.²⁶

This calculation—amounting to 2.847 trillion cubic feet of gas over 20 years—likely understates the induced new development. When the EIA updated its analysis in 2014 and added a surrogate for the Cove Point facility—assuming one bcf/day of LNG export capacity from the Mid-Atlantic region—the predicted amount of increased gas production stimulated by LNG exports increased to 61–84 percent, with 70 percent coming from shale sources.²⁷

The annual volume of gas that will be supplied to Cove Point can be combined with shale gas production rates to estimate the number of new wells needed to maintain production over 20 years.²⁸ DOE used initial production and

²⁶ Sierra Club et al., Comments on Environmental Assessment for Dominion Cove Point LNG, LP, FERC Docket No. CP13-113, Accession No. 20140616-5269, at 32 (June 16, 2014) ("EA Comments") (footnotes revised) [JA____].

²⁷ EIA 2014 Study, *supra* note 9, at 9–12.

²⁸ Production rates can be calculated easily from production records, such as those posted on the website of the Pennsylvania Department of Environmental Protection. *See* Pa. Dep't of Env'tl. Prot., <http://www.dep.pa.gov/> (last visited Oct. 27, 2016). Even ordinary citizens have mined that data to compute production declines in Pennsylvania. *See, e.g., Real Marcellus Gas Production*, Marcellus-Shale.us, <http://www.marcellus-shale.us/marcellus-production.htm> (last visited Oct. 26, 2016) (tracking 190 wells over three years).

an estimated decline rate to calculate 30-year production volumes per well for the Marcellus Shale.²⁹ Over 30 years, the Project would require more than 1,300 wells, and DOE easily could have used its decline curve to estimate the number of wells required to supply Cove Point over a 20-year period.³⁰

The record also contains information that identifies where gas development would take place and the route of its transportation to the Cove Point. Cabot announced that the gas would come from its “Marcellus Shale position in Northeast Pennsylvania.”³¹ Specifically, Cabot’s drilled wells and its permitted-but-not-yet-drilled wells are clustered in and near Susquehanna County,

²⁹ Nat’l Energy Technology Laboratory, *Life Cycle Analysis of Natural Gas Extraction and Power Generation* 18 (May 29, 2014).

³⁰ FERC used a less sophisticated methodology to estimate the number of wells Cabot would need to supply gas from Susquehanna County to the Constitution Pipeline. *See* FERC, Final EIS for the Constitution Pipeline, CP13-499-000 & CP13-502-000, at § 4.13.2.1 (Oct. 24, 2014), <https://www.ferc.gov/industries/gas/enviro/eis/2014/10-24-14-eis.asp>. Using FERC’s approach, more than 1,000 new wells could be required right from the start to produce gas for the Project. Even if the current glut of gas could supply Cove Point for a few years, a large number of new wells would be needed to produce .39 bcf/day over two decades. *See* EA Comments, *supra* note 26, at 550–54 (documenting Cabot’s need to drill new wells to meet commitments) [JA____–____].

³¹ *See* LNG World News, *supra* note 14.

Pennsylvania.³² Cabot also stated publicly that would transport its gas from Susquehanna County to the export terminal via a newly proposed FERC-regulated pipeline.³³ The locations and status of Antero's wells also are a matter of public record.³⁴ All DOE needed to do was look.

C. The Health and Environmental Impacts of Project-Induced Gas Development and Transmission Are Readily Discernible.

With information about the number and location of wells, the environmental effects of Project-induced development are easily estimated.³⁵ Predicting both the nature and extent of those effects in the Marcellus and Utica shale region is particularly straightforward, because NYSDEC already has published a

³² Public mapping tools can be used to demonstrate that Cabot's wells are clustered largely in Susquehanna County, Pennsylvania. *See* EA Comments, *supra* note 26, at 35, 53 [JA____, ____].

³³ *See* Oil & Gas J., *supra* note 16; EA Comments, *supra* note 26, at 34–40, 51–53 [JA____–____, ____–____].

³⁴ *See* Pa. Dep't of Env'tl. Prot., *PA Oil & Gas Mapping*, <http://www.depgis.state.pa.us/PaOilAndGasMapping/OilGasWellsStrayGasMap.html> (last visited Oct. 27, 2016) (providing oil and gas well inventories by operator); Ohio Dep't of Natural Res., *Ohio Oil & Gas Wells*, <https://gis.ohiodnr.gov/MapView/?config=OilGasWells> (last visited Oct. 27, 2016) (same); W.Va. Dep't of Env'tl. Prot., *WVDEP Office of Oil & Gas Well Locator*, <http://tagis.dep.wv.gov/oog/> (last updated Sept. 19, 2016) (same).

³⁵ *See* EA Comments, *supra* note 26, at 32–53 (describing effects of foreseeable induced gas drilling and pipeline construction) [JA____–____].

comprehensive study of the impacts of developing northeastern shale gas.³⁶ That study compiles data collected from northern Pennsylvania and West Virginia and spells out the damage caused by a typical shale gas well to land, water, air, ecosystems, human health, and rural communities. DOE therefore could have developed an indirect impact analysis targeted to the number of Project-induced wells in the well development region specifically serving Cove Point.

That evaluation would have shown that shale gas development caused by the Project poses “a real risk of serious environmental consequences.”³⁷ As NYSDEC concluded, public health threats from the use of hydraulic fracturing to stimulate gas production from northeastern shale deposits include:

- 1) air impacts that could affect respiratory health due to increased levels of particulate matter, diesel exhaust, or volatile organic chemicals; 2) climate change impacts due to methane and other volatile organic chemical

³⁶ Although the FSGEIS was not released until 2015, NYSDEC’s impact analysis was largely complete and available to the public in 2011—well before DOE issued its 2014 FONSI. *See* NYSDEC, Revised Draft Supplemental Generic Environmental Impact Statement (Dec. 2011) (“RDSGEIS”), <http://www.dec.ny.gov/data/dmn/rdsgeisfull0911.pdf>. Indeed, DOE specifically cited NYSDEC’s draft EIS as a reference in the Addendum. *See* Addendum at 72–73 [JA____–____]. All DOE needed to do was to apply NYSDEC’s analysis to the facts of this case.

³⁷ DOE, Sec’y of Energy Advisory Bd., Shale Gas Production Subcommittee Second Ninety-Day Report 10 (Nov. 28, 2011), http://energy.gov/sites/prod/files/90day_Report_Second_11.18.11.pdf [JA____].

releases to the atmosphere; 3) drinking water impacts from underground migration of methane and/or fracturing fluid chemicals associated with faulty well construction or seismic activity; 4) surface spills potentially resulting in soil, groundwater, and surface water contamination; 5) surface water contamination resulting from inadequate wastewater treatment; 6) earthquakes and creation of fissures induced during the hydraulic fracturing stage; and 7) community character impacts such as increased vehicle traffic, road damage, noise, odor complaints, and increased local demand for housing and medical care.³⁸

NYSDEC provided a detailed analysis of all of those impacts, which readily could have been applied to the number and locations of new Marcellus and Utica shale wells forecast to supply Cove Point with gas to provide an understanding of Project-induced indirect impacts in the development regions.³⁹

For example, NYSDEC found that hydraulic fracturing of shale gas wells used an average of approximately 4.2 million gallons of water per well.⁴⁰ A 2013

³⁸ NYSDEC, FSGEIS, *supra* note 5, Executive Summary at 2 (May 13, 2015), http://www.dec.ny.gov/docs/materials_minerals_pdf/fsgeis2015es.pdf.

³⁹ The impacts from shale gas development can be described in some detail, even if the precise longitude and latitude of every well is not known. DOE has never contested the fact that Cabot wells will supply gas from Susquehanna County, Pennsylvania. Moreover, the fact that the wells would be developed in the Marcellus and Utica shale plays allowed NYSDEC to develop a comprehensive EIS of more than 1,500 pages. *See* Addendum at 72–73 [JA____].

⁴⁰ NYSDEC, FSGEIS, *supra* note 5, at 6-10; *see* EA Comments, *supra* note 26, at 45 (noting use of up to 7.2 million gallons in longer wells) [JA____].

study prepared by the U.S. Geological Service in cooperation with DOE confirmed that figure.⁴¹ DOE therefore was in a position to estimate that 4.2 billion gallons of fresh water would be used to develop 1,000 wells induced by the Project, and that 90 percent of that water—the equivalent of about 57,000 Olympic swimming pools—would remain deep underground and lost from the hydrologic cycle.⁴² Instead, DOE offered no assessment of the impacts of large-scale water withdrawals in the shale development region.

NYSDEC also provided an estimate of air emissions from each shale gas well pad, assuming no more than four wells per pad in a single year.⁴³ By the time that DOE issued its FONSI, there was a sizable and growing literature about air pollution from gas development, including from sites in Susquehanna County,

⁴¹ U.S. Geological Survey, *Water Resources and Shale Gas/Oil Production in the Appalachian Basin—Critical Issues and Evolving Developments* 2 (Aug. 2013), <https://pubs.usgs.gov/of/2013/1137/pdf/ofr2013-1137.pdf>.

⁴² *See id.*

⁴³ NYSDEC, RDSGEIS, *supra* note 36, at 6-105.

Pennsylvania.⁴⁴ Although the serious risks posed by air contamination were well known by then, DOE offered the people in Pennsylvania's shale gas fields no analysis of Project impacts on their air quality or health.

New wells and pipelines routed through forest habitats, agricultural lands, and rural communities also carry environmental consequences. Clearing and maintaining pipeline routes disturb the land, discharging dust, dirt, and rocks that can pollute waterways.⁴⁵ Emissions from the pipelines and associated compressor stations contribute to air pollution and climate change.⁴⁶ Again, DOE offered no discussion of Project-induced pipeline impacts.

Under NEPA, DOE may not avoid disclosing environmental impacts by refusing to investigate easily discernible facts. Because minimal inquiry could have illuminated the Project's indirect impacts, DOE should have prepared an EIS for the Project. *See Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 937 F.

⁴⁴ *See, e.g.,* Concerned Health Prof'ls of N.Y., *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)* (July 2014), <http://phpa.dhmh.maryland.gov/OEHFP/EH/Shared%20Documents/Marcellus%20Shale%20Public%20Comments/ZimmermanAttch7CHPNY.pdf> (collecting sources); Gregg P. Macey et al., *Air Concentrations of Volatile Compounds Near Oil and Gas Production: A Community-Based Exploratory Study*, 13 *Envtl. Health* 82 (2014), <http://ehjournal.biomedcentral.com/articles/10.1186/1476-069X-13-82>.

⁴⁵ *See* EA Comments, *supra* note 26, at 43–44, 51–53 [JA__–__, __–__].

⁴⁶ *See id.* at 41–42 [JA__–__].

Supp. 2d 1140, 1159 (N.D. Cal. 2013) (“Preparation [of an EIS] is mandated where uncertainty may be resolved by further collection of data, or where collection of such data may prevent speculation on potential effects.” (quoting *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1240 (9th Cir. 2005))). Even if the impacts resisted precise quantification, DOE could not “simply ignore the effect.”⁴⁷ *Mid States*, 345 F.3d at 549 (“[W]hen the nature of the effect is reasonably foreseeable but the extent is not . . . [an] agency may not simply ignore the effect.”); see *Potomac Alliance v. U.S. Nuclear Regulatory Comm’n*, 682 F.2d 1030, 1036–37 (D.C. Cir. 1982) (noting that an agency cannot “be allowed to abjure informed prediction of possibilities”) (internal quotation omitted). DOE’s FONSI therefore failed NEPA’s “hard look” standard.

⁴⁷ In *Mid States*, the Surface Transportation Board refused to estimate how burning coal brought to market by a new railway would affect the environment, citing uncertainty about “where [additional power] plants will be built, and how much coal these new unnamed power plants would use.” 345 F.3d at 549. The Court of Appeals concluded, however, that the missing information “show[e]d only that the *extent* of the effect [was] speculative.” *Id.* (emphasis in original). The *nature* of the effect was foreseeable, however, because it was “almost certainly true . . . that the proposed project [would] increase the long-term demand for coal and any adverse effects from burning coal.” *Id.* Similarly, Project exports almost certainly will increase long-term demand for gas and the effects of producing and burning the fuel.

III. DOE Failed to Evaluate the Project's Life-Cycle Climate Impacts.

In issuing its FONSI, DOE arbitrarily refused to take a hard look at the full extent of greenhouse gas emissions that will result from the Project and did not evaluate the impacts of Project emissions on the human environment.⁴⁸ In defiance of repeated pleas from EPA, the EA quantified only emissions directly from Project facilities and ignored (1) the greenhouse gas emissions of the upstream Project-induced gas development or the downstream shipping and combustion of LNG liquefied at Cove Point and (2) the climate impacts of the Project's life-cycle greenhouse gas emissions, including those directly from the liquefaction facilities.⁴⁹ Even for the emissions it did consider, the EA offered no analysis of their climate impacts.

⁴⁸ Council on Env'tl. Quality, *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews* 16 n.42 (Aug. 1, 2016) ("CEQ Guidance"), https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf (recommending that agencies "draw on existing, timely, objective, and authoritative analyses" to assess a project's estimated direct and indirect GHG emissions) [JA____].

⁴⁹ EPA, Region 3, *supra* note 8 [JA____]; *see* Letter from EPA, Region 6, to FERC, Regarding "Lake Charles Liquefaction Project," FERC Docket No. CP14-119, CP14-12, & CP14-122 (June 9, 2015), <http://elibrary.ferc.gov/idmws/search/fercadvsearch.asp> (enter Accession No. 20150609-0062) (asking for analysis of the "[greenhouse gas] emissions associated with the production, transportation, and combustion of the natural gas proposed to be exported"—"even where the ultimate end use of the natural gas occurs outside of the US").

The record demonstrates that Project exports will induce additional gas production and that, at every stage, gas development and transmission will leak methane, a potent greenhouse gas.⁵⁰ Record evidence also confirms that transporting LNG overseas and burning it contributes to climate change.⁵¹ None of the documents on which DOE relied in conducting its NEPA analysis rebutted this evidence, which shows over 26 million tons per year of lifecycle greenhouse gases from the Project.⁵² Without any analysis of indirect emissions, DOE's FONSI is unsupported.

⁵⁰ EA Comments, *supra* note 26, at 57 [JA____].

⁵¹ *Id.* at 57–58 [JA____–____].

⁵² *See id.* at 59 [JA____]. As an alternative to Amici's calculation, DOE could have used the "Upstream Dashboard," a tool developed by the National Energy Technology Laboratory, to calculate emissions from fossil fuel extraction and transportation, *see* DOE, *New Tool Yields Custom Environmental Data for Lifecycle Analysis* (Sept. 10, 2012), <http://energy.gov/fe/articles/new-tool-yields-custom-environmental-data-lifecycle-analysis>, and studies developed by private modelers, *see* Petitioner's Brief at 21 (citing models). On remand, DOE also can use the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation model, which can be used to estimate emissions from extraction, processing, transportation, and combustion, Argonne Nat'l Laboratory, *REET Model*, <https://greet.es.anl.gov/> (last updated Oct. 7, 2016); or the World Gas Model, which can be used with other tools to estimate emissions associated with increases in gas production and consumption, *see* Deloitte MarketPoint, *Natural Gas Models*, <https://www.deloittemarketpoint.com/industries/natural-gas/world-gas-model> (last visited Oct. 24, 2016).

DOE cannot cure that unlawful omission by invoking alleged uncertainty about how India and Japan will respond to receipt of LNG from the Project. *See* Petitioner’s Brief at 59–62. The indirect greenhouse gas emissions from the Project alone exceed 24 million tons per year—more than the emissions from the Maryland’s entire fleet of coal-fired power plants.⁵³ By any standard, doubling those power plant emissions is a significant impact that should have been analyzed in an EIS. Having declined even to consider them in its NEPA analysis, DOE had no basis for finding that the Project’s greenhouse gas emissions would be insignificant and failed to act as a reasoned decision-maker. *Mid States*, 345 F.3d at 549 (explaining that “it is almost certainly true” that a railroad’s proposal to build tracks to coal mines “will increase the long-term demand for coal and any adverse effects that result from burning coal”); *see S. Fork Band Council of W. Shoshone of Nev. v. U.S. Dep’t of Interior*, 588 F.3d 718, 725–26 (9th Cir. 2009) (holding unlawful the failure to evaluate the environmental impacts of transporting and processing ore in approving a mining permit); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1197–98 (D. Colo. 2014) (rejecting argument that coal produced under newly leased land would “perfect[ly] substitute[]” for other coal to be burned—leaving environmental effects

⁵³ EA Comments, *supra* note 26, at 59 [JA____].

unchanged—and requiring the agency to analyze “[t]his reasonably foreseeable effect . . . , even if the precise extent of the effect is less certain”).

Other federal agencies have conducted the analysis of greenhouse gas emissions that DOE has refused to do.⁵⁴ The U.S. Forest Service provided a life-cycle greenhouse gas analysis—including transport, refining, and end use—for its oil and gas leasing in the Fishlake National Forest.⁵⁵ The federal Department of Agriculture, in its environmental review of a coal-leasing program, calculated the potential greenhouse gas emissions from combustion of the mined coal, even though the exact location of combustion was unknown.⁵⁶ The Army Corps of Engineers analyzed the total lifecycle greenhouse gas effects of a proposed gas pipeline, including emissions from increased gas production induced by the

⁵⁴ Jessica Wentz et al., Sabin Ctr. for Climate Change Law, *Survey of Climate Change Considerations in Federal Environmental Impact Statements, 2012–2014*, at iii (2016), https://web.law.columbia.edu/sites/default/files/microsites/climate-change/survey_of_climate_change_considerations_in_federal_environmental_impact_statements_2012-2014.pdf.

⁵⁵ *See id.* (citing U.S. Forest Serv., Record of Decision and Final Environmental Impact Statement, Oil and Gas Leasing Analysis, Fishlake National Forest 169 (Aug. 2013)).

⁵⁶ U.S. Dep’t of Agric., Final EIS, Federal Coal Lease Modifications COC-1362 & COC-67232, at 79–80 (Aug. 2012), http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/68608_FSPLT2_263949.pdf.

pipeline and emissions from burning the fuel transported by the pipeline.⁵⁷ Even FERC considered the greenhouse gas impacts of burning LNG to be exported from the West Coast.⁵⁸ These examples demonstrate that the Project's greenhouse gas emissions could have—and should have—been estimated.

In addition, DOE should have used available tools to assess the impacts of the estimated volume of greenhouse gas emissions that will be caused by Project exports.⁵⁹ *See, e.g., High Country Conservation Advocates*, 52 F. Supp. 3d at 1190. The social cost of carbon is one such tool, which is widely used both in the U.S. and abroad to monetize the climate impacts of greenhouse gas emissions.⁶⁰ The Council on Environmental Quality recognizes that the social cost of carbon “provides a harmonized, interagency metric that can give decision makers and the

⁵⁷ *See* U.S. Army Corps of Eng'rs, Final EIS, Alaska Stand Alone Gas Pipeline, at §§ 5.20-68 to 5.20-78 (Oct. 2012), http://www.arlis.org/docs/vol1/AlaskaGas/Report2/Report_USACE2/index.html.

⁵⁸ FERC, Draft EIS, Jordan Cove Liquefaction and Pacific Connector Pipeline Projects, CP13-483-000 & CP13-492-000, § 4.12.1.4 (2014), <https://www.ferc.gov/industries/gas/enviro/eis/2014/11-07-14-eis.asp> (analyzing greenhouse gas emissions from combusting gas to be exported).

⁵⁹ *See* EPA, *The Social Cost of Carbon*, <https://www.epa.gov/climatechange/social-cost-carbon> (last updated Sept. 9, 2016).

⁶⁰ *See* Env'tl. Def. Fund et al., *Frequently Asked Questions*, The Cost of Carbon, <http://costofcarbon.org/faq> (last visited Oct. 24, 2016) (noting use of the tool in domestic and foreign rulemakings, corporate financial planning, and a utility ratemaking).

public useful information for their NEPA review.”⁶¹ DOE also could have assessed climate impacts by evaluating the effect of Project emissions on the goals set by the President’s Climate Action Plan. *See* Petitioner’s Br. at 30–32.

The *High Country* court held that, under NEPA, an agency that quantifies benefits of a project also must quantify its costs. 52 F. Supp. 3d at 1191. Because the dollar value of lease modifications had been included in the Forest Service’s final EIS, the court ruled that the document also should have used the social cost of carbon to monetize the project’s climate costs. *See id.* In the case of Cove Point, DOE quantified the monetary benefits of LNG exports.⁶² It therefore should have used the social cost of carbon to disclose the Project’s life-cycle climate costs.⁶³ DOE nevertheless chose not to do so—even for *direct* Project emissions quantified in the EA. DOE’s failure to evaluate the real-world climate impacts of Project-induced activities, from gas drilling in the Northeast to eventual burning overseas, is arbitrary, capricious, and unlawful under NEPA.

⁶¹ *See* CEQ Guidance, *supra* note 48, at 33 n.86 [JA____].

⁶² *See* DOE, Order Conditionally Granting Long-Term Multi-Contract Authorization to Export LNG by Vessel from the Cove Point LNG Terminal to Non-Free Trade Agreement Nations, DOE/FE Order No. 3331, FE Docket No. 11-128-LNG, 25–29, 137–42 (Sept. 11, 2013) [JA____].

⁶³ The Seventh Circuit upheld DOE’s use of the social cost of carbon to monetize climate impacts of rules for which it also estimated benefits. *See Zero Zone, Inc. v. U.S. Dep’t of Energy*, 832 F.3d 654, 677–78 (7th Cir. 2016).

CONCLUSION AND RELIEF REQUESTED

For the foregoing reasons, Amici respectfully request that the Court vacate DOE's orders authorizing the Project and denying rehearing and remand this proceeding to DOE for preparation of an EIS in compliance with NEPA.

Dated: October 31, 2016

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CERTIFICATE OF COMPLIANCE

This Amicus Brief complies with the type-volume limitation of this Court's order of September 16, 2016, because this brief contains 6,961 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii) and Circuit Rule 32(e)(1). Microsoft Word 2010 computed the word count.

This Amicus Brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface (Microsoft Word 2010 Times New Roman) in 14 point font.

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Dated: October 31, 2016

/s/ Deborah Goldberg

CERTIFICATE OF SERVICE

I hereby certify that on October 31, 2016, I caused a true and correct copy of the foregoing Brief of Amici Curiae of Chesapeake Climate Action Network, EarthReports, Inc., Patuxent Riverkeeper, and Stewards of the Lower Susquehanna to be served on all registered counsel via the electronic filing system of the U.S. Court of Appeals for the D.C. Circuit.

/s/ Deborah Goldberg_____